

REMARKS

I. STATUS OF CLAIMS

Having amended claims 1, 8, 9, and 10, claims 1-21 are pending in the present application.

II. CLAIM OBJECTION

In the Office Action dated February 28, 2005 (the “Office Action”), the Examiner objected to claim 8 as reciting the phrase “the chamber of claim 8.” Claim 8 has been amended to correct the minor informality. In view of amended claim 8, the Examiner is respectfully requested to withdraw the objection to claim 8.

III. OBJECTION TO SPECIFICATION

The Examiner objected to the specification as failing to provide proper antecedent basis for the subject matter of claim 21. In view of the amended specification, the Examiner is respectfully requested to withdraw the objection to the specification.

IV. DOUBLE PATENTING REJECTIONS

The Examiner rejected claims 1-16 and 21 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 and 18 of the U.S. Patent No. 6,447,733. The Examiner also rejected claims 17-20 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 16-17 of U.S. Patent No. 6,447,733 in view of U.S.P.N. 4,118,313 issued to Hadamovsky et al. (the “Hadamovsky patent”).

In view of the Terminal Disclaimer attached to the present paper, the Examiner is respectfully requested to withdraw the double patenting rejections.

V. ART REJECTIONS

A. Claims 1-2, 4-6, 12 and 15-21

In the Office Action, the Examiner rejected claims 1-2, 4-6, 12 and 15-21 under 35 U.S.C. § 103(a) as being unpatentable over U.S.P.N. 4,029,578 issued to Turk (the “Turk patent”) in view of the Hadamovsky patent. This rejection is respectfully traversed.

The Examiner conceded that the Turk patent “fails to teach first baffle inclining upwardly at a first angle between 10 and 45 degrees.” (Page 5 of the Office Action.) The Examiner stated that the Hadamovsky patent teaches the missing feature of baffles inclining upwardly. The Examiner then alleged that the Turk and Hadamovsky patents could be combined to render obvious the claimed invention of the present application. The Examiner stated that it would have been obvious to “modify the baffles of the Turk [patent] by inclining them” as taught by the Hadamovsky patent in order to “keep the height of the contact chamber small (col. 13, lines 44-47.)” (Page 5 of the Office Action.)

The Turk and Hadamovsky patents cannot be combined because of lack of motivation. First, the Examiner’s suggestion to modify the Turk patent to include inclined baffles in order to “keep the height of the contact chamber small” contradicts the teachings of the Hadamovsky patent. The Hadamovsky patent states at col. 13, lines 44-47:

It will also be understood that the angle of inclination of the plates inclined in a column as shown in FIGS. 4a and 4b should be as small as possible, since thereby the columns can be kept small in structural height.

It will be appreciated that the Hadamovsky patent suggests that the angle of inclination should be “as small as possible” in order to keep the columns (*i.e.*, the chamber) “small in structural height.” It follows that the smallest structural height is obtained by having the lowest angle of inclination, which is zero, and it is such a structure that is shown in the Turk patent. If the goal is to “keep the height of the contact chamber small,” then one skilled in the art would not modify the structure shown in the Turk patent at all because it already has attained the smallest structural height. Hadamovsky teaches away from the modification proposed by the Examiner.

Second, the Hadamovsky patent relates to scrubbing procedures that separate solids from a scrubbing liquid. As such, it requires two passageways (gaps) **5, 6** formed between its plates (baffles) **4** and sides. A heavier stream of matter flows down through one of the passageways **6** while a lighter stream of matter flows upwardly through another one of the passageways **5** (Col. 7, lines 54-59 of the Hadamovsky patent). If the baffles of the Hadamovsky patent were to replace the baffles of the Turk patent, they would also include two passageways. The Turk patent does not teach or suggest that baffles with two passageways would be beneficial.

If the Examiner is suggesting that the baffles of the Turk patent be modified to have an inclination angle of the Hadamovsky patent but not the two passageways, such a modification is impermissible because it must rely on hindsight and the teaching of the Applicants’ specification. Should the Examiner persist in urging such a modification, the Examiner is respectfully requested to provide a proper basis for the requisite motivation to modify the Turk patent in view of the Hadamovsky patent to include baffles with an inclination angle while having only one passageway (not two passageways). The Applicants respectfully submit that, with no such

motivation provided in the present Office Action, the Examiner has failed to establish a *prima facie* case of obviousness.

Accordingly, since neither the Turk patent nor the Hadamovsky patent, taken alone or in combination teaches or suggests the claimed elements, claims 1-2, 4-6, 12 and 15-21 are patentably distinguishable from the cited prior art. The rejection should properly be withdrawn.

B. Claims 3, 7-11, and 13-14

The Examiner rejected claims 7-9 under 35 U.S.C. § 103(a) as being unpatentable over the Turk patent in view of the Hadamovsky patent and further in view of U.S.P.N. 4,028,246 issued to Lund et al. (the “Lund patent”). The Examiner also rejected claim 3 under 35 U.S.C. § 103(a) as being unpatentable over the Turk patent in view of the Hadamovsky patent and further in view of U.S.P.N. 5,091,118 issued to Burgher (the “Burgher patent”). The Examiner also rejected claims 13-14 under 35 U.S.C. § 103(a) as being unpatentable over the Turk patent in view of the Hadamovsky patent and further in view of the Burgher and Lund patents. The Examiner also rejected claims 10-11 under 35 U.S.C. § 103(a) as being unpatentable over the Turk patent in view of the Hadamovsky patent and further in view of U.S.P.N. 5,753,106 issued to Schenck (the “Schenck patent”). These rejections are respectfully traversed.

All of the above recited rejections include the combination of the Turk and Hadamovsky patents. As discussed in the previous section, the Turk and Hadamovsky patents cannot be combined. Moreover, the dependent claims recite their own independently patentable features.

For instance, amended claim 9 requires:

each of an adjacent pair of said at least one first and second baffles of the means for directing the flow is disposed at an angle relative to the ultrasonic emitter such that an emitted ultrasonic signal is directed through the eddy.

In other words, claim 9 not only requires an ultrasonic emitter but also requires a specific placement of it in relation to the eddy. No such requirement is taught or suggested in the combination of the cited prior art, even if they were combined as improperly suggested by the Examiner.

Hence, claims 3, 7-11, and 13-14 are patentably distinguishable from the cited prior art. In view of the foregoing amendments and remarks, Applicants respectfully request the reconsideration of this application and the timely allowance of the pending claims.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for this Amendment, or credit any overpayment to deposit account no. 08-0219.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to deposit account no. 08-0219.

Respectfully submitted,

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